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## CLAIMS

What is claimed is:

1.  A method for managing resources within a distributed data processing system, the method comprising the steps of:

receiving a lease request for a resource;

in response to receiving the lease request, securing leases on a logical circuit of resources through the distributed data processing system; and

in response to securing leases on a logical circuit of resources, sending a lease grant for the resource.

2.  The method of claim 1, wherein the step of receiving a lease request for a resource further comprises:

receiving, at a first resource manager, a request from a resource requester to lease a first requested resource for a requested lease period.

3.  The method of claim 2, wherein the step of securing a logical circuit of resources further comprises:

determining a data path through the distributed data processing system between the resource requester and the requested resource;

requesting, by the first resource manager, a lease from a second resource manager for a second requested resource along the data path, wherein use of the first requested resource requires use of the second requested resource; and

receiving, at the first resource manager, a first granted lease for the second requested resource from the second resource manager.

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4.  The method of claim 3, wherein the step of sending a lease grant for the resource further comprises:

5      in response to receiving the first granted lease for the second requested resource, sending a second granted lease to the resource requester by the first resource manager.

10   5.  The method of claim 4 further comprising:
        detecting an oversubscribed condition on the first requested resource; and
        in response to the detected oversubscribed condition, reducing a requested lease period in the
15   second granted lease.

6.  The method of claim 3, wherein the step of determining a data path through the distributed data processing system further comprises:
20      retrieving a predetermined data path that has been previously stored after a dynamic discovery process of devices within the distributed data processing system.

7.  The method of claim 1 further comprising:
25      detecting an oversubscribed condition on the resource; and
        reducing a lease period for the granted lease.

8.  The method of claim 1 further comprising:
30      detecting an error condition; and
        reducing a lease period for the lease grant.

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9. An apparatus for managing resources within a distributed data processing system, the apparatus comprising:

first receiving means for receiving a lease request for a resource;

securing means for securing, in response to receiving the lease request, leases on a logical circuit of resources through the distributed data processing system; and

sending means for sending, in response to securing leases on a logical circuit of resources, a lease grant for the resource.

10. The apparatus of claim 9, wherein the first receiving means further comprises:

second receiving means for receiving, at a first resource manager, a request from a resource requester to lease a first requested resource for a requested lease period.

11. The apparatus of claim 10, wherein the securing means further comprises:

determining means for determining a data path through the distributed data processing system between the resource requester and the requested resource;

requesting means for requesting, by the first resource manager, a lease from a second resource manager for a second requested resource along the data path, wherein use of the first requested resource requires use of the second requested resource; and

third receiving means for receiving, at the first resource manager, a first granted lease for the second requested resource from the second resource manager.

5    12.   The apparatus of claim 11, wherein the first sending means further comprises:

second sending means for sending, in response to receiving the first granted lease for the second requested resource, a second granted lease to the

10    resource requester by the first resource manager.

13.   The apparatus of claim 12 further comprising:

first detecting means for detecting an oversubscribed condition on the first requested resource;

15   and

first reducing means for reducing in response to the detected oversubscribed condition, a requested lease period in the second granted lease.

20    14.   The apparatus of claim 11, wherein the determining means further comprises:

retrieving means for retrieving a predetermined data path that has been previously stored after a dynamic discovery process of devices within the distributed data

25   processing system.

15.   The apparatus of claim 9 further comprising:

second detecting means for detecting an oversubscribed condition on the resource; and

30    second reducing means for reducing a lease period for the granted lease.

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16.  The apparatus of claim 9 further comprising:

third detecting means for detecting an error condition; and

third reducing means for reducing a lease period for

5   the lease grant.


17.  A computer program product on a computer readable medium for use in a data processing system for managing resources within the distributed data processing system,

10   the computer program product comprising:

first instructions for receiving a lease request for a resource;

instructions for securing, in response to receiving the lease request, leases on a logical circuit of

15   resources through the distributed data processing system; and

first instructions for sending, in response to securing leases on a logical circuit of resources, a lease grant for the resource.

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18.  The computer program product of claim 17, wherein the first instructions for receiving further comprises:

second instructions for receiving, at a first resource manager, a request from a resource requester to

25   lease a first requested resource for a requested lease period.


19.  The computer program product of claim 18, wherein the instructions for securing further comprises:

30   instructions for determining a data path through the distributed data processing system between the resource requester and the requested resource;

instructions for requesting, by the first resource manager, a lease from a second resource manager for a second requested resource along the data path, wherein use of the first requested resource requires use of the second requested resource; and

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third instructions for receiving, at the first resource manager, a first granted lease for the second requested resource from the second resource manager.

10    20.  The computer program product of claim 19, wherein the first instructions for sending further comprises:

second instructions for sending, in response to receiving the first granted lease for the second requested resource, a second granted lease to the

15    resource requester by the first resource manager.

21.  The computer program product of claim 20 further comprising:

first instructions for detecting an oversubscribed

20    condition on the first requested resource; and

first instructions for reducing in response to the detected oversubscribed condition, a requested lease period in the second granted lease.

25    22.  The computer program product of claim 19, wherein the instructions for determining further comprises:

instructions for retrieving a predetermined data path that has been previously stored after a dynamic discovery process of devices within the distributed data

30    processing system.

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23. The computer program product of claim 17 further comprising:

second instructions for detecting an oversubscribed condition on the resource; and

5      second instructions for reducing a lease period for the granted lease.

24. The computer program product of claim 17 further comprising:

10      third instructions for detecting an error condition; and

third instructions for reducing a lease period for the lease grant.

15   25. A network comprising:

first receiving means for receiving a lease request for a resource;

securing means for securing, in response to receiving the lease request, leases on a logical circuit

20   of resources through the distributed data processing system; and

sending means for sending, in response to securing leases on a logical circuit of resources, a lease grant for the resource.

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26. The network of claim 25, wherein the first receiving means further comprises:

second receiving means for receiving, at a first resource manager, a request from a resource requester to

30   lease a first requested resource for a requested lease period.

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27. The network of claim 26, wherein the securing means further comprises:

determining means for determining a data path through the distributed data processing system between the resource requester and the requested resource;

requesting means for requesting, by the first resource manager, a lease from a second resource manager for a second requested resource along the data path, wherein use of the first requested resource requires use of the second requested resource; and

third receiving means for receiving, at the first resource manager, a first granted lease for the second requested resource from the second resource manager.

28. The network of claim 27, wherein the first sending means further comprises:

second sending means for sending, in response to receiving the first granted lease for the second requested resource, a second granted lease to the resource requester by the first resource manager.

29. The network of claim 28 further comprising:

first detecting means for detecting an oversubscribed condition on the first requested resource; and

first reducing means for reducing in response to the detected oversubscribed condition, a requested lease period in the second granted lease.

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30. The network of claim 27, wherein the determining means further comprises:

retrieving means for retrieving a predetermined data path that has been previously stored after a dynamic

5  discovery process of devices within the distributed data processing system.

31. The network of claim 25 further comprising:

second detecting means for detecting an

10  oversubscribed condition on the resource; and

second reducing means for reducing a lease period for the granted lease.

32. The network of claim 25 further comprising:

15  third detecting means for detecting an error condition; and

third reducing means for reducing a lease period for the lease grant.

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